UNIVERSITI MALAYSIA PERLIS

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MOBILE ROBOT TEMPERATURE SENSING SYSTEM VIA SMARTPHONE

SUMMARY OF INVENTION

This mobile robot temperature sensing system is applied in places that acquired tedious temperature measurement such as in an infected with virus and burning area. Mobil robot temperature sensing system via Smartphone is an autonomous robot controlled using PIC16F877A controller. To communicate with the mobile robot, Bluebee Bluetooth module is used. User send instruction by using Smartphone to give order to the mobile robot. Temperature sensor, LM35 is attached to the mobile robot in order to detect the surrounding and human temperature. Once the temperature is measured, the data is sent via Bluetooth to the Smartphone and the next action will be considered.

ADVANTAGES

1. Be able to move in any given environment.
2. Be able to monitor the environment temperature and give initial warning if dangerous to human life.
3. Be able to control the mobile robot movement using Smartphone.

NOVELTY OF INVENTION

1. Using Smartphone to control the mobile robot movement and monitor the environment temperature/human temperature.
2. Using Bluetooth technology to be transceiver between Smartphone and microcontroller.

MARKET & FUTURE POTENTIAL

1. As a instrument to detect the environment temperature/human temperature and useful especially in application where risk is concern.
2. Attach a camera and ultrasonic/infrared sensor to the mobile robot so that easily to control the mobile robot moving and to avoid accident.
3. Uploading the system output (environmental parameter) like humidity, air quality, etc.
4. Using of Bluetooth shield can be altered by using a Wi-Fi or some other equipment with higher control range.

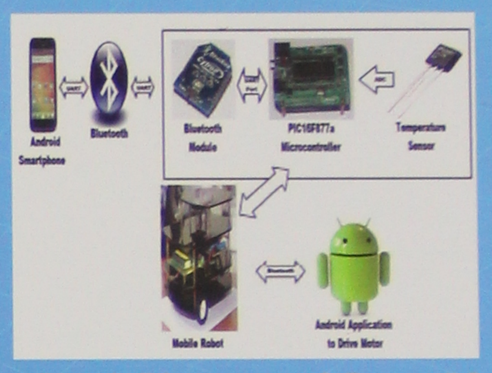

Figure 1 : Block Diagram of Overall System

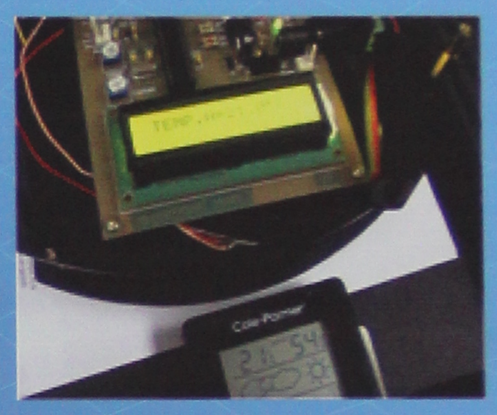

Figure 2 : Comparison Temperature Reading of Digital Barometer & Temperature Sensor

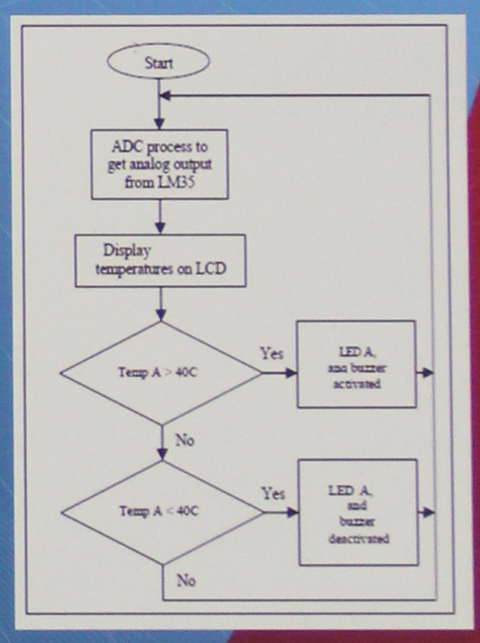

Figure 3 : Flowchart of Temperature Sensing System

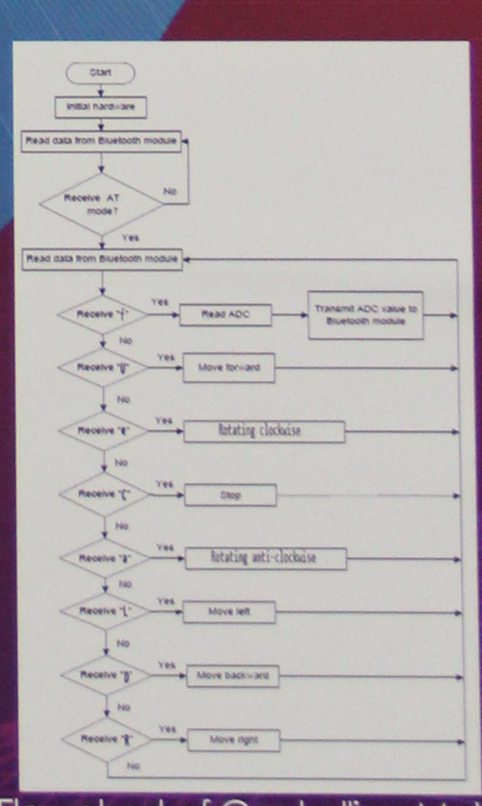

Figure 4: Flowchart of Controlling Mobile Robot

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